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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/756,956  
Filing Date: January 09, 2001  
Appellant(s): CLIVER ET AL.

**MAILED**  
**MAY 01 2007**  
**GROUP 1700**

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Milliken & Company  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 10/24/2006 appealing from the Office action mailed 2/10/2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

WO 99/67459	KANZIG	12-1999
4,131,422	THOMAS	12-1978
5,984,977	MOORE	11-1999

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-9, 14, 16-22, 25-39 and 41-42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kanzig et al. (WO 99/67459).

Kanzig et al. teach a process for printing hydrophobic fibre materials with disperse dyes, which comprises 1) dyeing or printing the fibre materials overall with a disperse dye, and 2) printing the fibre materials in areas with a printing paste, which comprises as component (A), at least one cationic assistant, as component (B), at least one polyethylene glycol, as component (C), at least one nonionogenic detergent and, optionally, as component (D), at least one disperse dye, it being possible for steps 1) and 2) to be carried out in any sequence and for step 2) to be carried out repeatedly without using any dye, or using different dyes, and, if necessary, drying the fibre material thus treated and then fixing the dye on the fibre material by heat treatment. See abstract.

Kanzig et al. teach that the disperse dyes suitable for steps 1) and 2) of the novel process are, for example, those dyes include, for example, car-boxylic acid- and/or sulfonic acid group-free nitro, amino, aminoketone, ketoninime, methine, polymethine, diphenylamine, quinoline, benzimidazole, xanthene, oxazine or coumarine dyes and, in particular, anthraquinone and azo dyes, such as mono- or disazo dyes. See page 2, paragraph 1.

Kanzig et al. teach that In addition to the dye, the dye liquor can contain other customary additives, for example acid donors, such as aliphatic amine chlorides or magnesium chloride, the aqueous solutions of inorganic salts, such as of alkali chlorides or alkali sulfates, alkali hydroxides, urea, thickeners, such as alginate thickeners, water-soluble cellulose alkyl ether, and also levelling agents, antifoams and/or deaerators, penetration accelerators, migration inhibitors, UV absorbers and wetting agents. See page 4, paragraph 3.

Kanzig et al. teach that the printing paste which may optionally be used in step 1) is a printing paste customarily used in printing technology, which comprises, in addition to the dye, the conventional assistants, for example thickeners of natural or synthetic origin, for example commercially available alginate thickeners, starch ethers or carob seed grain ether, in particular sodium alginate, by themselves or in admixture with modified cellulose, preferably with 20 to 25% by weight of carboxymethylcellulose. It is preferred to use synthetic thickeners, for example those based on poly(meth)acrylic acids, poly(meth)acrylamides, and their co- or terpolymers. If desired, the printing paste can also contain acid donors, such as butyrolactone or sodium hydrogenphosphate, preservatives, sequestrants, emulsifiers, water-insoluble solvents, oxidants, UV absorbers or deaerators. For printing the hydrophobic fibre materials, the printing paste is applied overall or in areas directly onto the fibre material, conveniently using printing machines of conventional make, for example rotogravure, rotary screen printing and flat screen printing apparatus. See page 4 paragraphs 4-5 and page 7 paragraphs 2-3 and page 8 paragraph 1.

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Kanzig et al. teach that the process can be used for different hydrophobic fibre materials. Polyester fibre materials are preferred. Also suitable are polyester-containing fibre blends, i.e. mixtures of polyester and other fibres, in particular cotton/polyester fibre materials. Wovens, knits or webs of these fibres are mainly used. See page 7, paragraph 4-5.

Kanzig et al. illustrate a two step printing/dyeing process wherein one printing/dyeing step is done all over the polyester pile fabric and the second printing/dyeing step is done in specific areas which results in a multicolored fabric having very good fastness. See example 5 on pages 13-14. Accordingly, the teachings of Kanzig et al. appear to anticipate the material limitations of the instant claims.

Alternatively, even if the broad teachings of Kanzig et al. are not sufficient to anticipate the material limitations of the instant claims, it would have been nonetheless obvious to one of ordinary skill in the art, to arrive at a process for manufacturing a patterned fabric comprising the steps of printing with a chemical substance and then dyeing substantially the entire fabric as recited by the instant claims because Kanzig et al. illustrate a process of forming a multicolored fabric comprising 1) dyeing or printing the fibre materials overall with a disperse dye, and 2) printing the fibre materials in areas with a printing paste, which comprises as component (A), at least one cationic assistant, as component (B), at least one polyethylene glycol, as component (C), at least one nonionogenic detergent and, optionally, as component (D), at least one disperse dye, it being possible for steps 1) and 2) to be carried out in any sequence and for step 2) to be carried out repeatedly without using any dye, or using different dyes.

Claims 1-42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Thomas et al. (US 4,131,422).

Thomas et al. teach polymer-printed fabrics are produced by applying to a textile fabric substrate, in a pre-determined pattern, an aqueous admixture consisting essentially of a substantially water-soluble acid dyeable polymer. The wetted printed substrate is dried to remove substantially all the water and thereafter cured. The cured polymer printed substrate is then dyed with a dye admixture containing an acid dyestuff preferential to the polymer coated portion of the substrate. See abstract.

Regarding the chemical substance used for printing, Thomas et al. teach that the essential ingredient of the aqueous admixture employed to produce the polymer-printed fabrics with differential dyeing characteristics of the present invention is the substantially water-soluble acid dyeable polymer. However, in addition to the acid dyeable polymer additional components, such as thickening agents, hygroscopic agents, anti-foaming agents, catalysts, volatile stabilizing agents and water fugitive tints can be incorporated in minor effective amounts in the liquid admixture. The amount of each of the additional components incorporated into the aqueous admixture can vary widely and will be dependent to a large extent upon the properties sought in the resulting liquid admixture. For example, in order to maintain the liquid admixture in a preselected viscosity range of from about 5 to 50,000 centipoise it is often necessary to incorporate into the aqueous admixture, in addition to the substantially water-soluble acid dyeable polymeric constituent, an effective amount of a thickening agent. The amount of thickening agent

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employed can vary widely depending upon the amount of polymeric constituent employed as well as the type of such constituent. However, it has been found generally desirable to incorporate from about 0.5 to about 3 weight percent of a thickening agent into the aqueous admixture to provide an aqueous admixture having the desired viscosity. Any suitable thickening agent can be employed provided it is compatible with the polymer, the textile substrate, and the acid dye stuff employed to dye the polymeric constituent. Typical of such thickeners are polyacrylic acids, hydroxy ethyl cellulose, natural gums, and the like. See col.5,ln.5-40.

Regarding the aqueous dye bath, Thomas et al. teach in example 1 that the polyester printed fabric is dyed using an aqueous dye bath. In example 9, Thomas et al. illustrate that the printed polyester fabric is dyed in an aqueous bath of 2 disperse dyes of different colors. Accordingly, the teachings of Thomas et al. appear to anticipate the material limitations of the instant claims.

Alternatively, even if the broad teachings of Thomas et al. are not sufficient to anticipate the material limitations of the instant claims, it would have been nonetheless obvious to one of ordinary skill in the art, to arrive at the specified continuous or semicontinuous dyeing process wherein the entire fabric is exposed to the dye as recited by the instant claims because Thomas et al. teach employing the same disperse dyes in an aqueous dye bath which are known in the art to be used in the various continuous and semicontinuous dyeing processes in general.



Claims 1, 3-4, 7, 9, 14, 17, 19-20, 22, 30, 31, 33-34, 36-38 and 42 are rejected under 35 U.S.C. 103(a) as obvious over Moore et al. (US 5,984,977).

Moore et al. teach a method for printing articles formed from cellulose, said method comprising the steps of:

- (a) printing the article with a dye blocking print paste, said composition comprising: a thickener paste; a cross-linking resin and a dye resist; and
- (b) thereafter dyeing the article.

Also, Moore et al. teach a method for printing articles formed from cellulose, said method comprising the steps of:

- (a) printing the article with a dye blocking print paste, said composition comprising: a thickener paste; a pre-catalyzed cross-linking resin and a dye resist;
- (b) printing the article with a dye enhancing print paste, said dye enhancing print paste including: (i) a thickener and (ii) an enhancing agent; and
- (c) thereafter dyeing the article.

See claims and col.2, ln20-col.3,ln.40 where Moore et al. teach a process of forming a multicolored cotton fabric.

Moore et al. do not teach exposing substantially the entire fabric to an aqueous dye liquor as recited by the instant claims.

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However, it would have been obvious to one of ordinary skill in the art to modify the teaching of Moore et al. and use an aqueous dye liquor on the entire fabric as recited by the instant claims since Moore et al. suggest printing the fabric with a print paste and there after dyeing the article in general.

#### **(10) Response to Argument**

Appellant's arguments filed 10/24/2006 with respect to claims 1-42 have been considered.

Appellant's also urge that the print pastes of Kanzig et al. incorporates ethylene oxide with castor oil which Appellant's understand to be wetting agents to increase wettability in a substrate. Contrary to Appellant's arguments, the instant example 5 illustrates fabric printed with alginate printing paste which excludes the ethylene oxide with castor oil wetting agents. See page 13-14.

Appellant's urge that the Examiner has given no weight to the fact that the claimed process utilizes a treatment that reduces wettability in the treated regions. In response, Examiner has given weight to the claimed process step of applying a chemical substance that is a dye resist print paste in a pattern then over dyeing with a dye. Examiner has relied upon the illustrated example 5 which does not incorporate ethylene oxide with castor oil which Appellant's understand to be wetting agents to increase wettability in a substrate. Thus, at least the print paste of example 5, would not increase the wettability of the substrate fabric.

Appellant's urge that Thomas et al. teach application of an anionic dye and cites col.2,ln.27-33 for the ion exchange mechanism of anionic dyes which enhances dying of

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the areas to which the polymer has been applied and thus is contradictory to the mechanism of the instant claims. Contrary to Appellant's arguments, in col.9, examples VII and VIII, Thomas et al. illustrate polyester printed fabric dyed using an aqueous dye bath comprising blue acid dyes and red disperse dyes which dyes are encompassed by the material limitations of instant claims.

Appellant's urge that Moore et al. involves chemically blocking dye sites during a discontinuous dye process in which both a glyoxal resin and a dye resist both must be present to effectively block the dye and cite col.3,ln.13-18 and table 3. In response to Appellant's argument that the references fail to show certain features of Appellant's invention, it is noted that the features upon which applicant relies (i.e., a chemical substance consisting of a print paste) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *in re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims rejected over Moore et al. do not exclude the claimed chemical substance from incorporating a print paste along with a resin. Regarding the argument to Moore et al. teaching a discontinuous process, this is not found convincing because in at least examples 3-6, Moore et al. illustrate printing cotton fabric with the dye blocking print paste with subsequent dyeing to the desired shade. See col.4,ln.1-5, 55-65. Furthermore, it has been held that arriving at a continuous process would have been obvious in light of the batch process of the prior art. See MPEP 2144.04, V. E.

Also Appellant's urge that Moore et al. teach that the dye blocking paste includes a wetting agent thus, the teaching of Moore is substantially different from the claimed

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mechanism requiring physically inhibiting wetting and reduction in wettability.

Regarding the limitation to physical inhibition of wetting, it is noted that independent claim 38 does not require physical inhibition of wetting. Furthermore, although Moore et al. suggest the preferential utility of a wetting agent in col.2,ln.66 and col.3, ln.3-4, Moore et al. teachings do not exclude physically inhibiting wetting since in col.2,ln.47-49, Moore et al. teach that the dye blocking print paste includes a thickener and a dye blocking agent without a wetting agent. The MPEP 2145, X. D. 1 states that the prior art's disclosure of more than one alternative does not constitute a teaching away from any of these alternatives.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Examiner Kumar, AU 1751

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